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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PIERRE LOUIS, ANDRE

ART UNIT PAPER NUMBER

2123

DATE MAILED: 08/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/042,548

Applicant(s)

SHEREDY, JOSEPH

Examiner

Andre Pierre-Louis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>01/09/2002</u> . | 6) <input type="checkbox"/> Other: _____ |

PD

DETAILED ACTION

1. Claims 1-32 have been presented for examination.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

- 2.1. The abstract of the disclosure is objected to because of legal phraseology in lines 2 and 3. Correction is required. See MPEP § 608.01(b).

Claim Objections

3. Claim 7 is objected to because of spelling error. The word "capparatus" is misspelled. It is apparent that the error is inadvertent and that the word should be "apparatus" as spelled in the previous claims. Appropriate correction is required.
4. Claim 22 is objected to, under 37 CFR 1.75, as being a substantial duplicate of claim 8. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is

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proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

5. Claims 29-32 are objected to because of the following informalities: the word "An" at the beginning of each of the claims should be "the". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 15, 20 and 24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claimed limitation, whereby the first read channel could receive the signal coming out of the summing circuit is not supported by the specification. The specification merely shows that SOC1 and SOC2 have the first and second means for reading data respectively and that the second means for reading data receives the signal coming out of the summing circuit.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 24-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Furukawa (U.S. Pat. No. 6,498,998).

7.1. Regarding the independent claim 24, Furukawa discloses a method for testing a first SOC with a second SOC and particularly teaches the steps of:

connecting an output of a signal generator to an input of a read channel portion of the second SOC (*see figure 1 connection between 10 and 14*);

connecting an output of a write driver portion of a first SOC to a first input of the summing circuit (*see figure 2(52)*);

connecting the output of the signal generator to a second input of the summing circuit (*see figure 2(50)*); and

connecting the output of the adding circuit to an input of a read channel portion of the first SOC (*see figure 2(56)*).

7.2. As per claim 25, Furukawa teaches a signal generator (21) that generates a write signal (50) in synchronization with the timing signal (52) (*see figure 2*).

7.3. With regards to claim 26, Furukawa teaches that the summing circuit (28) adds the write signal (50) and the timing signal (52) together to produce a combined signal having a write signal component and a timing signal component (*see figure 2*).

7.4. As per claim 27, Furukawa teaches a second SOC that differentiates the timing signal component (52) of the combined signal, wherein the timing signal

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component (52) simulates a servo signal, and wherein the write signal component (50) simulates a signal being accessed by the a read channel (see figure 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa (U.S. Pat. No. 6,498,998), as applied to the rejection of claims 24-27 above, in view of Turnquist (U.S. Patent No. 6,557,128).

8.1. Regarding claim 28, Furukawa teaches most of the claim limitations. However, he does not teach that the SOC1 is the same as SOC2. But, Turnquist teaches the testing of two SOC's, where SOC1 is the same as SOC2 being tested (see Turnquist figure 2A and 2B col. 2 line 34-40). It would have been obvious for one ordinary skilled of the art to add the testing feature of multiple identical SOC's in one system in order to save time and money by not having to use a separate system to test the second SOC.

9. Claims 1, 4-6,9-11,14,16,19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer (U.S. Patent No. 6,076,180), in view of Furukawa (U.S. Pat. No. 6,498,998).

9.1. In considering the independent claims 1,6,11,16,21, Meyer discloses an apparatus for testing a system on a chip (SOC), particularly he teaches the use of:

a first SOC (117) comprising a first hard disk controller (*fig.3(301)*) and a first read channel (*fig.1(103)*).

a second SOC (117) comprising a second hard disk (*fig.3(303)*) and a second read channel (*fig.1(109)*). However, Meyer does not teach an arbitrary waveform generator (AWG) to generate a timing signal; and an adder in communication with the arbitrary waveform generator, wherein the first SOC differentiates the timing signal received from the arbitrary waveform generator, wherein the first SOC generates a write signal in synchronization with the timing signal, wherein the adder adds the write signal from the first SOC and the timing signal to output a combined signal having a timing signal component and a write signal component; and wherein the second SOC differentiates the timing signal component which simulates a servo signal and the write signal component being accessed by a read channel.

Furukawa teaches an arbitrary waveform generator (AWG) to generate a timing signal (*see Furukawa fig. 2(21)*); and an adder (*fig.2 (28)*) in communication with the arbitrary waveform generator, wherein the first SOC differentiates (*fig.2 (16)*) the timing signal (*fig.2 (50)*) received from the arbitrary waveform generator, wherein the first SOC generates a write signal (*fig.2 (52)*) in synchronization with the timing signal, wherein the adder adds the write signal from the first SOC and the timing signal to output a combined signal (*fig.2(56)*) having a timing signal component and a write signal component (*fig. 2(28), col. 5 lines 35-40*); and wherein the second SOC differentiates the timing signal component (50) which simulates a servo signal and the write signal component (52) being accessed by a read channel (*see figure 2*).

Thus, it have been obvious for one ordinary skill of the art at the time of applicant' invention to modify Meyer system by adding the arbitrary waveform generator to generate the timing signal and the adder in communication with the AWG to combined timing signal and the write signal to be outputted to the its destination. This would have allowed users of Meyer's system to synthesize the two signals.

9.2. With regards to claims 4,9,14,19, the combined teachings of Meyer and Furukawa teach that the output of the AWG is received by the first read channel (see *Furukawa figure 2, col.4 line 47-50*).

9.3. As per claims 5,10, the combined teachings of Meyer and Furukawa teach that the output of the adder is received by the second read channel (see *Furukawa fig.2 col. 9 lines 30-33*).

10. Claims 2,7,12,17, 23, and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over (Meyer and Furukawa) as applied to claims 1, 4-6,9-11,14,16,19, and 21 above, and further in view of Satoh et al. (U.S. Patent No. 6,697,976).

10.1. Regarding claims 2,7,12,17, and 23, the combined teachings of Meyer and Furukawa disclose most of the claims limitations. However, they do not teach a first host to control the first SOC and a second host to control the second SOC. But, Satoh et al. teaches a first host (*fig.4 (50)*) to control the first SOC and a second host (*fig.4 (51)*) to control the second SOC. It would have been obvious to one ordinary skilled in the art to modify the Meyer and Furukawa system by adding a host for each individual SOC for performing different task on its respective SOC. This would have allowed users

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of the Meyer and Furukawa's system to manually test more Socs in a shorter period of time by having one user at each host computer.

10.2. As per claims 29-32, the combined teachings of (Meyer and Furukawa) and Satoh et al. disclose the write driver to generate the write signal (see *Satoh et al. figure 3,4,5, and 6 item 44 col.4 lines 5-8*).

11. Claims 3,8,13,18, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over (Meyer and Furukawa) as applied to claims (1, 4-6,9-11,14,16,19,21) above, and further in view of Turnquist (U.S. Patent No. 6,557,128).

11.1. With regards to claims 3,8,13,18, 22, (Meyer and Furukawa) teaches most of the claims limitations. However, they do not teach that the SOC1 is the same as SOC2. But, Turnquist teaches the testing two SOC's, where SOC1 is the same as SOC2 being tested (see Turnquist figure 2A and 2B col. 2 line 34-40). It would have been obvious for one ordinary skilled of the art to add the testing feature of multiple identical SOC's in one system in order to save time and money by not having to use a separate system to test the second SOC.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Claims 1-32 are rejected and claims 7,22,29-32 are objected to; this action is non-final.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre Pierre-Louis whose telephone number is 571-272-8636. The examiner can normally be reached on Mon-Fri, 8:00am-4: 30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jean R. Homere can be reached on 571-272-3780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

07/20/2005

APL


JEAN R. HOMERE
PRIMARY EXAMINER